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10/791,432

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Juergen Benz

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EXAMINER

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JUERGEN BENZ and REINHARD BERGER

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Appeal 2010-001473  
Application 10/791,432  
Technology Center 3600

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Before: JOHN C. KERINS, KEN B. BARRETT, and  
PHILLIP J. KAUFFMAN, Administrative Patent Judges.

KAUFFMAN, Administrative Patent Judge.

DECISION ON APPEAL

## STATEMENT OF CASE

Juergen Benz and Reinhard Berger (Appellants) appeal under 35 U.S.C. § 134 from a rejection of claims 1-22. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

## THE INVENTION

Appellants' claimed invention "relates to a method for controlling a clutch which is located between a drive motor and an automated manual transmission of a drive train." Spec. 1, para. [0002]. Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A method for controlling a clutch located between a drive motor and an automated manual transmission of a drive train, the method comprising:

controlling the clutch so as to change from an engine braking mode to a free wheeling<sup>1</sup> mode; and

reengaging the clutch when a gas pedal is operated in the free-wheeling mode only when an engine rotational speed is above a transmission input rotational speed.

## REJECTION

Appellants seek review of the Examiner's rejection of claims 1-22 under 35 U.S.C. § 103(a) as being unpatentable over Shigyo (US 6,878,095 B2; issued April 12, 2005) and Nozaki (US 5,547,438; issued August 20, 1996).

## CONTENTIONS AND ISSUES

Appellants argue claims 1-17 as a group. App. Br. 5-7. We select claim 1 as the representative claim, and claims 2-17 stand or fall with claim 1. See 37 C.F.R. § 41.37(c)(1)(vii).

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<sup>1</sup> Claim 1 uses the term "free-wheeling" both with and without a hyphen. We hyphenate the term throughout for consistency.

Independent claim 1 is directed to a method for controlling a clutch located between a drive motor and an automated manual transmission of a drive train that includes the step of “reengaging the clutch when a gas pedal is operated in free-wheeling mode only when an engine rotational speed is above a transmission input rotational speed.”

The Examiner found that Shigyo discloses a clutch control system that controls the clutch (by disengaging it) so as to change from an engine braking mode to a free-wheeling mode. Ans. 3-4. The Examiner also found that Shigyo does not disclose reengaging the clutch when a gas pedal is operated in free-wheeling mode only when an engine rotational speed is above a transmission input rotational speed. Id. The Examiner found that Nozaki discloses that clutch 24 should be engaged when the engine speed ( $N_E$ ) is higher than the transmission input speed ( $N_T$ ) so that damper (23) can desirably absorb an engaging shock of coupling members of clutch 24. Ans. 4. The Examiner concluded that based on this teaching in Nozaki it would have been obvious to modify Shigyo’s system to control the clutch so as to change from the engine braking mode to the free-wheeling mode only when an engine rotational speed is above a transmission input rotational speed, “in order to effectively implement smooth engagement/reengagement of the clutch and eliminate any engaging shock associated with the clutch operations.” Ans. 5.

Appellants make several assertions that Nozaki does not disclose “reengaging the clutch when a gas pedal is operated in free-wheeling mode only when an engine rotational speed is above a transmission input rotational speed,” and that the Examiner’s rationale for the proposed combination is insufficient. App. Br. 5-7.